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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,163	09/17/2003	Sandra R. Bulson	POU920030140US1	8450

46369 7590 07/24/2007

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EXAMINER	
TANG, KENNETH	
ART UNIT	PAPER NUMBER
2195	

MAIL DATE	DELIVERY MODE
07/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/667,163	BULSON ET AL.	
	Examiner	Art Unit	
	Kenneth Tang	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/17/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-50 are presented for examination.

Specification

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. The invention of claims 1-50 is directed to non-statutory subject matter.

4. As to claims 1, 18, 22, 38, and 47, the limitations of "obtaining ..." and "starting..." may provide a useful and concrete result, however, do not provide a tangible result. The claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at *>1373-74<, 47 USPQ2d at 1601-02 (see MPEP 2106).

5. As to claims 23, 32, and 36-37, it is non-statutory under 35 USC 101 because the claims do not fall within one of the four statutory categories of patent eligible subject matter (process, machine, manufacture, or composition of matter) (see MPEP 2106). The system as claimed does not fall within the process, manufacture, or composition of matter categories. Furthermore, the

system as claimed does not fall within the "machine" category because the claimed system is a virtual, logical, and non-physical.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-12 and 15-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Borkowski et al. (hereinafter Borkowski) (US 6,978,455 B1).

7. As to claim 1, Borkowski teaches a method of managing execution of requests of a computing environment, said method comprising:

obtaining by a node (Virtual Machine Manager 310) of the computing environment a request to be processed (col. 2, lines 62-67); and

starting a virtual machine on the node (Virtual Machine Manager 310 is a manager of virtual machines) to process the request, said virtual machine being exclusive to the request (specific mapping provides exclusivity and no interfering) (col. 4, lines 25-47, col. 5, lines 6-11).

8. As to claim 2, Borkowski teaches wherein the starting is managed at least in part by another virtual machine of the node (Virtual Machine Manager 310) (col. 4, lines 25-47, col. 5, lines 6-11).

9. As to claim 3, Borkowski teaches wherein said obtaining comprises receiving the request by another virtual machine of the node, and wherein the starting comprises starting the virtual machine by the another virtual machine (col. 4, lines 25-47, col. 5, lines 6-11).

10. As to claim 4, Borkowski teaches wherein the receiving the request comprises receiving the request from a job management service (Command Code State Machine 314) coupled to the another virtual machine (Fig. 3, item 314, col. 3, lines 64-67).

11. As to claim 5, Borkowski teaches wherein the starting comprises providing one or more resources to the virtual machine to process the request (col. 3, lines 21-50).

12. As to claim 6, Borkowski teaches further comprising shutting down the virtual machine, in response to completing the request (Fig. 4, 412, col. 3, lines 50-58).

13. As to claim 7, Borkowski teaches wherein the shutting down comprises returning one or more resources provided to the virtual machine (Fig. 4, 412, col. 3, lines 50-58, col. 4, lines 5-10).

14. As to claim 8, Borkowski teaches wherein said shutting down (power down) is managed at least in part by another virtual machine of the node (col. 13, lines 12-56, Fig. 4, 412).

15. As to claim 9, Borkowski teaches wherein said shutting down comprises using by the another virtual machine a communications service to shut down the virtual machine (col. 13, lines 12-56, Fig. 4, 412).

16. As to claim 10, Borkowski teaches wherein said obtaining comprises obtaining by another virtual machine of the node the request to be processed, and wherein the starting comprises: providing by the another virtual machine to a communications service coupled to said another virtual machine and said virtual machine a start indication indicating that the virtual machine is to be started; and using the communications service to start the virtual machine (col. 13, lines 12-56, Fig. 4, 412, col. 4, lines 1-35).

17. As to claim 11, Borkowski teaches further comprising: determining which node of a plurality of nodes is available (alive) to process the request; and sending the request to the node determined to be available (col. 3, lines 21-39).

18. As to claim 12, Borkowski teaches wherein said determining comprises obtaining from one or more other virtual machines of one or more nodes of the plurality of nodes information to be used in the determining (col. 3, lines 1-39).

19. As to claim 15, Borkowski teaches further comprising processing the request by the virtual machine (col. 3, lines 21-50).

20. As to claim 16, Borkowski teaches further comprising providing from said virtual machine to a job management service information (Command Code State Machine 314) regarding the request being processed (Fig. 3, item 314, col. 3, lines 64-67).

21. As to claim 17, Borkowski teaches wherein said virtual machine is a sanitized virtual machine (col. 5, lines 6-11, col. 4, lines 30-47).

22. As to claim 18, similar to claim 1, Borkowski teaches a method of managing initiation of virtual machines of a computing environment, said method comprising:

determining by one virtual machine (Virtual Machine Manager 310) of a computing environment that another virtual machine is to be initiated (Virtual Machine Manager 310 is a manager of virtual machines) (col. 2, lines 62-67); and

initiating, by the one virtual machine, the another virtual machine (col. 2, lines 62-67).

23. As to claim 19, Borkowski teaches wherein the determining is in response to receiving by the one virtual machine a request to be processed (col. 4, lines 25-47, col. 5, lines 6-11).

24. As to claim 20, Borkowski teaches wherein the request is for utilization of machine resources (col. 3, lines 21-50).

25. As to claim 21, Borkowski teaches wherein said initiating comprises using by the one virtual machine a communications service in initiating the another virtual machine (col. 4, lines 25-47, col. 5, lines 6-11).

26. As to claim 22, Borkowski teaches a method of providing an on-demand (demand by a request) infrastructure, said method comprising:

deploying logic on at least one node of a computing environment to automatically provide a virtual machine on-demand (col. 3, lines 3-40 and col. 4, lines 25-48, Fig. 3, 310, 312-N, 314).

27. As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 1.

28. As to claim 24, it is rejected for the same reasons as stated in the rejection of claim 3.

29. As to claim 25, it is rejected for the same reasons as stated in the rejection of claim 5.

30. As to claim 26, it is rejected for the same reasons as stated in the rejection of claim 6.

31. As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 8.

32. As to claim 28, it is rejected for the same reasons as stated in the rejection of claim 10.

33. As to claim 29, it is rejected for the same reasons as stated in the rejection of claim 11.

34. As to claim 30, it is rejected for the same reasons as stated in the rejection of claim 12.

35. As to claim 31, it is rejected for the same reasons as stated in the rejection of claim 16.

36. As to claim 32, it is rejected for the same reasons as stated in the rejection of claim 18.

37. As to claim 33, it is rejected for the same reasons as stated in the rejection of claim 19.

38. As to claim 34, it is rejected for the same reasons as stated in the rejection of claim 20.

39. As to claim 35, it is rejected for the same reasons as stated in the rejection of claim 21.

40. As to claim 36, it is rejected for the same reasons as stated in the rejection of claim 1.

41. As to claim 37, it is rejected for the same reasons as stated in the rejection of claim 1.

42. As to claims 38-46, they are rejected for the same reasons as stated in the rejections of claims 24-31.

43. As to claims 47-50, they are rejected for the same reasons as stated in the rejections of claims 18-21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

44. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkowski et al. (hereinafter Borkowski) (US 6,978,455 B1) in view of Johnson (US 6,788,980 B1).

45. As to claim 13, Borkowski is silent in teaching wherein said plurality of nodes include at least one node that is heterogeneous to another node. However, Johnson teaches a virtual machine environment that includes nodes that are heterogeneous (see Abstract, col. 2, lines 15-28, col. 7, lines 48-58). Borkowski and Johnson are analogous art because they are from the same field of endeavor of a virtual machine environment. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Borkowski's virtual machine environment to include Johnson's feature of heterogeneous nodes/devices in a virtual machine environment. The suggestion/motivation for doing so would have been to allow for communication/harmonization between the nodes (col. 2, lines 15-55, col. 3, lines 23-25).

46. As to claim 14, it is rejected for the same reasons as stated in the rejection of claim 13.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kt
7/18/07

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